

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for database synchronization in a network element management system, comprising:

at least one or more network elements which compare block units of information ~~in a common memory, the storing current status memory, information and information in a sync-related memory, the storing previous status memory, in block units for thereby transmitting the results of the comparison~~ information, the at least one or more network elements transmitting data results of the comparison; and

a network element management system which stores the data results transmitted from the network elements for thereby monitoring and managing the network elements in real time.

2. (Currently Amended) The apparatus for database synchronization in a network element management system of claim 1, wherein, in said at least one or more network elements, said common memory, ~~the current status memory,~~ and said sync-related memory, ~~the previous status memory,~~ are connected to each other for thereby periodically comparing information within both memories periodically.

3. (Currently Amended) The apparatus for database synchronization in a network element management system of claim 1, wherein each of said at least one or more network elements~~each have their databases~~ includes a separate database.

4. (Currently Amended) The apparatus for database synchronization in a network element management system of claim 1, wherein said network element management system has a sync-related memory for storing changes in memory ~~which are the results of~~ based on the comparison between ~~memories~~ the common memory and the sync-related memory of said at least one or more network ~~network~~ elements.

5. (Currently Amended) The apparatus for database synchronization in a network element management system of claim 1, wherein said network element management system has a common memory which is connected with said sync-related ~~system memory~~ to thereby ~~thereby~~ store ~~the current network status~~ information transmitted as the data results.

6. (Currently Amended) The apparatus for database synchronization in a network element management system of claim 1, wherein said network element management system ~~has~~ its includes a database.

7. (Currently Amended) The apparatus for database synchronization in a network element management system of claim 1, wherein ~~a transmitted the data includes results include:~~
a header bit which indicates ~~the a~~ block partitioning sequencing ~~of the entire~~
~~memory;~~
a EndFlag bit which indicates ~~the a~~ last block; and
a data bit which indicates ~~a real~~ data of each block.

8. (Currently Amended) In a network element management system which is provided with at least one or more network elements, a method for database synchronization in a network element management system, comprising the steps of:
comparing block units of information in a common memory which reflects database information, ~~the current alarm state, etc. of said network elements, and~~ with block units of information in a sync-related memory which stores data prior to a certain period, ~~in block units;~~
transmitting only modified block data, as a result of said comparison, to said network element management system; and
storing said transmitted data in the memory of the network ~~element~~ element management system.

9. (Currently Amended) The method for database synchronization in a network element management system of claim 8, wherein said step of comparing the information in the two memories in block units includes an initialization step in which initial values of the memories are set according to database information and alarm information, and waiting for a synchronization request ~~is waited for~~.

10. (Currently Amended) The method for database synchronization in a network element management system of claim 9, wherein said initialization step includes:

a step in which at least one or more network elements initialize a common memory according to their database information and alarm information;

a step of initializing said common memory and ~~a~~ the sync-related memory at ~~the a~~ same time; and

a step of waiting for a SYNC_REQ signal from said network element management system.

11. (Currently Amended) The method for database synchronization in a network element management system of claim 9, wherein said step of transmitting said modified data to said network element management system includes:

a step of transmitting ~~the a~~ position and data of ~~the a~~ corresponding block when ~~both~~ data in said common memory and data in said sync-related memory are not identical;

a step of copying the corresponding block of the common memory ~~in said network element management system~~ into the corresponding block of the sync-related ~~data~~memory; and

a step of comparing ~~the~~ a next block again when said both data are identical.

12. (Currently Amended) The method for database synchronization in a network element management system of claim 11, wherein said step of transmitting said modified data to said network element management system further includes a step of not copying the corresponding block of the common memory ~~in said network element management system~~ into the corresponding block of the sync-related ~~data~~ memory, in the case that a transmission of the modified data to the network element management system has failed.

13. (Currently Amended) The method for database synchronization in a network element management system of claim 8, wherein said transmitted data includes:

a header bit which indicates ~~the~~ a block partitioning sequencing ~~of the entire memory~~;

an EndFlag bit which indicates ~~the~~ a last block; and

a data bit which indicates ~~a real~~ data of each block.

14. (Currently Amended) The method for database synchronization in a network element management system of claim 8, wherein said step of comparing block units of said two memories ~~in block units~~ further includes:

a step of transmitting ~~the~~ a last block of said network elements to said network element management system, in the case that there is no change in blocks.

15. (Currently Amended) The method for database synchronization in a network element management system of claim 8, wherein said step of comparing block units of said two memories ~~in block units~~ further includes:

a resynchronization step of setting initial values of the memories according to said database information and said alarm information, and synchronizing said values, in the case that said network element management system continues not receiving signals from said network elements more than a certain number of times for a certain period (T).

16. (Previously Presented) The method for database synchronization in a network element management system of claim 15, wherein said resynchronization step includes:

a step of passing to a manual synchronization step in order not to impose a load on the corresponding link, in the case that the resynchronization step is proceeded for a certain time, but synchronization is not established.

17. (Currently Amended) The method for database synchronization in a network element management system of claim 15, wherein said resynchronization step includes:

a step of waiting for a resynchronization signal from said network element management system, in the case that a link error is recovered;

a step of comparing both data in said common memory and said sync-related memory when said resynchronization signal is received; and

a step of transmitting changes occurred during said link error to the network element management.

18. (Currently Amended) The method for database synchronization in a network element management system of claim 16, wherein said manual synchronization step includes:

a step of transmitting ~~a~~-sync-related data to said network element management system, when a link error recovery is confirmed by a network operator.

a step of passing to said periodical reporting step; and

a step of maintaining ~~the~~ a current manual state, when said link error recovery is not confirmed.

19. (New) The apparatus for database synchronization in a network element management system of claim 1, wherein the network element management stores the data results

so as to synchronize data between the network element management system and the at least one or more network elements.

20. (New) The method for database synchronization in a network element management system of claim 8, wherein the network element management stores the data so as to synchronize data between the network element management system and the at least one or more network elements.

21. (New) A data synchronization method comprising:
comparing blocks of information in a common memory of a network element with blocks of information in a sync-related memory of the network element;
transmitting data from the network element to a management system based on the comparison; and
storing the transmitted information in the management system.

22. (New) The method of claim 21, wherein transmitting the data involves transmitted modified information of the blocks of data.

23. (New) The method of claim 21, further comprising providing initial values to the common memory and the sync-related memory.

24. (New) The method of claim 21, wherein transmitting the data includes transmitting a position and data block of information stored in the management system.

25. (New) The method of claim 21, wherein the transmitted data includes:
- a header bit to indicate a block partitioning sequencing;
 - an EndFlag bit to indicate a last block; and
 - a data bit to indicate data of each block.